CHEMISTRY INFORMATION SHEET ’16-‘17

Honors Chemistry provides a basic knowledge of matter, its changes and how these relate to everyday life. The student must be willing to put forth effort in order to develop the ability to think and reason scientifically and critically. Emphasis is placed on states of matter and energy changes, nomenclature, chemical reactions, mathematics within a compound and a chemical reaction, stoichiometry, atomic theory, bonding theory, periodic trends, gas laws, and an introduction to acids and bases. If there is time, we may also be able to touch on and introduction to organic chemistry. A laboratory program is included to reinforce the development of concepts and acquaint the student with scientific investigation.

STUDENT RESPONSIBILITIES

1. Pen or a pencil

2. Notebook/Folder for handouts & Bound Notebook for labs and Learning Logs(You can purchase the BHS laboratory lab book from the bookstore also!!)

3. Scientific Calculator

4. Completed homework assignments

5. A positive attitude, every day

6. Attendance, every day

ATTENDANCE

Students are responsible for getting assignments and for material covered during missed classes. If you are absent on the day a lab or assignment is due, you must turn it in the day you return. If you do not turn it in, there will be a deduction. It is a good idea to find a “study buddy” and exchange phone numbers with a classmate so you can get any missed information. Any labs that are missed must be made up at a mutually agreeable time.

Please check out my wiki on [www.bhschem.wikispaces.com](http://www.bhschem.wikispaces.com). It is under “Reti’s classes.” There is a wealth of information on the chem wiki since it is a collaboration of all the chemistry teachers. It is a great resource. It is your responsibility to check the wiki out and to print out the material needed for the topics covered in class. If you miss an assignment, lab, quiz or a test, please see me as soon as you return so that the work may be made up.

**Grades:**

You can check your progress at any time by going to the eSchool Plus website. I will upload grades to eSchoolPlus on a regular basis.

* **Major Assessments and/or Major Projects 30%**
  + *You will take a Major Assessment at the end of each unit covered (two to three tests each marking period.)  The percentages you earn on each test will be averaged together to find your Major Assessment grade.*
* **Minor Assessments and/or Minor Projects 30%**
  + *Minor Assessments will include quizzes, lab quizzes and lab write ups.* 
    - *Quizzes are designed to check a student’s knowledge prior to the major assessment. Students are encouraged to ask questions and check their understanding prior to taking any assessments.*
    - *Labs will be completely recorded in the bound notebook. All data should be hand written in during the lab. Graphs and certain data tables may be done on the computer and can be cut and pasted into the lab manual.*
* **Quarterly Assessment 10%**
  + *You can think of the Quarterly Assessment as “midterms” for this course. Each of the quarterly assessments will cover ALL of the material presented during that marking period.*
* **Classwork 20%**
  + *Your classwork grade will reflect the effort that you put in during class and your completion of the learning log.* 
    - *Your teacher may keep a participation log in which a student who participates fully during class will earn points. Students who do not stay on task during the whole class will earn less than the maximum points. This may include group presentations of problems to the class on white boards.*
    - *Classwork may be checked for attempt at the end of the period. This may be your “ticket out” of class. If you make a reasonable attempt, there will be no deduction.*
    - *You may also be required to complete a learning log at the end of each class. This log will be graded on a scale that reflects the effort you put into it.*
* **Homework 10%**
  + *There will be homework following each class period. Homework may include problems, questions, finishing a lab report, studying for tests or quizzes, outlining or reading.* 
    - *Homework assignments are to be done and will be checked for effort. Even if you don’t get the right answer, be sure to understand what YOU did. Knowing what you know, and what you DON’T know are your keys for success in chemistry. With that said, you will be asked (frequently) to present an answer on a white board. The presentation of homework problems is a key element to the class and an excellent formative assessment.*
    - *Additionally, there will be a culminating “chapter” homework that will be turned in for evaluation. This will be graded for correctness but only after all concepts have been taught.*

**Behavior:**

Students are expected to be courteous and treat each other and the teacher with respect. Parents will be contacted if behavior is not appropriate. Because this class is done in a lab room containing expensive equipment, lots of glass and potentially hazardous chemicals, absolutely NO horseplay will be tolerated. Failure to follow proper laboratory safety measures can result in forfeiture of lab privileges. Good behavior during labs is extremely important to the safety of everyone in the class.

**Cell Phone Policy:**

Cell phones should not be out at any time during class. If you are found to be using the phone for social purposes during class, it may be confiscated according to school policy.

The charging of cell phones during class is not allowed.

FROM THE CHEMISTRY TEACHERS

Chemistry is sometimes challenging, but well worth it. We hope that we can convey to you the love and respect we have for the subject. We know it will be a great semester for all of us. If you are having any difficulty with the subject matter, please DON’T procrastinate. Let me know right away and we can arrange a help session. Tuesdays and Thursdays work best due to the bus schedule. Emails can also be sent to me at: [vreti@bensalemsd.org](mailto:vreti@bensalemsd.org) . If you prefer voicemail, please contact me a t (215) 750-2800 ext. 3667.

**Chemistry Syllabus (Core Curriculum)**

**Marking Period 1**

**Measurement and Safety** 2 weeks

*CHEM A.1.1 How properties are used to describe matter*

Safety *CHEM.A.1.1.2*  Safety Quiz

Measurement *CHEM.A.1.1.2*  Measurement SI Sig Figs *CHEM.A.1.1.3* Sig Fig Ass.

Percent error *CHEM.A.1.1.3*

**Matter** 2 weeks

*CHEM A.1.1 How properties are used to describe matter*

Conservation of Mass *CHEM.A.1.1.1* Mass Activity

Element Compound &Mixtures *CHEM.A.1.1.1* Classifying Matter

Homogenous & Heterogeneous *CHEM.A.1.2.2* Homo/Hetero

Physical &Chemical Properties *CHEM.A.1.1.1* Density Lab

Particle Diagrams *CHEM.B.1.4.1*

**Energy** 1 week

Phases of matter Melting Point Lab

Specific Heat SHC of Metals Lab

Heat of Fusion Hfus of Water Lab

**Gas Laws** 3 weeks

*CHEM.B.2.2 Behavior of gases*

Kinetic Theory *CHEM.B.2.2.1* Vacuum Pump demos

Boyles Law *CHEM.B.2.2.1* Boyle’s Law Lab

Charles Law *CHEM.B.2.2.1* Charles Law Activity

Gay-Lussac’s Law *CHEM.B.2.2.1* Gay-Lussac’s Law Ac

Combined Law *CHEM.B.2.2.1*

Graphing Gas Laws *CHEM.B.2.2.1* Graphing Gas Laws

Ideal Gas Law (HONORS) *CHEM.B.2.2.1*

Collection Over Mercury and Water

**Marking Period 2**

**Evolution of the Atomic Theory**  3 weeks

*CHEM.A.2.1 Explain Atomic Theory*

Dalton *CHEM.A.2.1.1*

Thomson *CHEM.A.2.1.1*

Ernest Rutherford *CHEM.A.2.1.1* Gold Foil Activity

Niels Bohr *CHEM.A.2.1.1* Flame Tests

Evolution of the atomic theory *CHEM.A.2.1.1*

Subatomic Particles *CHEM.A.2.1.2*

Isotopes (HONORS) *CHEM.A.2.1.2*

**Periodic Table** 2 weeks

*CHEM.A.2.3 Periodic Trends*

History of Periodic Table *CHEM.A.2.3.1* Periodic Table

Families and Groups *CHEM.A.2.3.1* PT

Solids, Liquid, and Gases *CHEM.A.2.3.1* PT

Metals, Non metals and Metalloids *CHEM.A.2.3.1* PT

Periodic Trends *CHEM.A.2.2.2* Reactivity Activity

**Electron Configuration** 1 week

*CHEM.A.2.2 Behavior of electrons*

Electron arrangement *CHEM.A.2.2.1* Flame Test Lab

Spectra *CHEM.A.2.2.4* Spectroscope Lab

**Chemical Formulas** 2 weeks

*CHEM.A.1.1 Apply IUPAC rules to name compounds*

Ionic Compounds *CHEM.A.1.1.5*

Molecular Compounds *CHEM.A.1.1.5* Like dissolves Like

Stock System and Traditional System Molecular/Ionic Lab

**Marking Period 3**

**Chemical Bonding** HONORS 1 week

*CHEM.B.1.4 How are models used for bonding.*

Ionization Energy *CHEM.B.1.3.1*

Electronegativity *CHEM.B.1.3.1*

Polar and Non Polar Bonds *CHEM.B.1.3.2*

Lewis Dot *CHEM.B.1.4.2* Lewis Dot

Molecular Geometry *CHEM.B.1.4.1* Molecular Geometry Lab

Linear, Bent, Trigonal Planar, Pyramidal, Tetrahedral

**Solutions**  1 week

*CHEM.A.1.2 Compare the properties of mixtures*

Factors affecting Solubility *CHEM.A.1.2.3* Solubility of KCl at Varying Temperatures

Solubility graphs *CHEM.A.1.2.3* Solubility Graphs

Separating Mixtures *CHEM.A.1.2.2* Activity Molarity *CHEM.A.1.2.4* Solutions Lab

**Chemical Equations** 2 weeks

*CHEM.B.2.1 Predict what happens n a chemical reaction*

Classifying Equations *CHEM B.2.1.3*

Predicting Products *CHEM B.2.1.4* Single & Double

Replacement Labs

Balancing Equations *CHEM B.2.1.5* Balancing Equations

Limiting Reactants HONORS *CHEM.B.2.1.1* Nail Lab

**Marking Period 4**

**Molar Relationships** 3 weeks

*CHEM B.1.1 Explain a Mole concept*

Formula Mass *CHEM.B.1.1.1*

Mass –Moles Conversion *CHEM.B.1.1.1* Mole Relationship Lab

Moles- Molecules Conversion *CHEM.B.1.1.1*

Moles – Volume *CHEM.B.1.1.1*

Percent Composition *CHEM.B.1.2.3* Hydrate Lab

Empirical Formulas *CHEM.B.1.2.1* Hydrate Lab(2 ways)

**Stoichiometry** HONORS 2 weeks

*CHEM B.1.2 Apply the Mole concept*

Stoichiometry *CHEM.B.2.1.2* Nail Lab

**Acids, Bases, and Salts** (if time permits) 1 week

Naming and properties

pH and pOH Titration Lab